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ABSTRACT

To evaluate the impact of revision--as distinct from other writing enrichment activities such as peer or teacher feedback--on writing skills, two classes of college-bound high school seniors who voluntarily enrolled in a writing course, were given similar instruction in writing evaluation and skill development. While both classes were permitted to do as many drafts of writing assignments as they wished, the "reviser" section was required to revise work nine times. These sections and a third control group (non-college bound seniors enrolled in a conventional class) that had received no special instruction were given pretests and posttests involving prewriting, writing, evaluation, and revision. Results indicated that required formal revision made no significant difference in student writing achievement between the two experimental classes. It did, however, influence student writing habits: those who had been required to revise reported an increased use of revision in other work. The study suggested that formal revision may not have been necessary at this stage of these students' development because of the enrichment training course in evaluation and use of peer feedback, training in audience awareness, etc., before the revision stage. (MM)

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The Effect of Formal Revision On Improving Writing Skills

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Running Head: Effects of Formal Revision

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The Effect of Formal Revision On Improving Writing Skills

The experts have told high school teachers of writing that they must insist that students revise their papers if those students are to improve their overall writing skills. High school teachers, pragmatically, know that students will not revise unless forced or cajoled to do so, resist the very idea of revising papers, and become bored and displeased with the writing process when forced to revise. And yet, the assumption that revision is necessary in learning to write is so overwhelming, that the high school teacher practitioners are hesitant to challenge the college-researcher "experts."

This study examines this assumption and past studies said to support or question the efficacy of formal revision; separates formal revision from feedback, instruction and pre-writing; and presents a theory to explain the findings. The findings are not conclusive, but what educational findings are? The questions that the study raises are important and should not be idly discarded because of past unproven beliefs. There are serious questions about the amount of time and effort expended on formal revision, questions that will not go away by being ignored.

As the teaching of the process of writing has gained importance, writing has often been divided into three stages: pre-writing, writing and revision. Although this linear concept has occasionally been decried by a few researchers, (Sommers, 1979) the three stages have been accepted by

teachers as convenient divisions. Perl (1979) observed that basic writers have the three recognizable stages. She further observed, and others concurred, that revision could be recursive as well as formal and could happen before the actual writing, during the writing process, or immediately after writing, as well as in the teacher-assigned, multiple-draft, formal stage. Thus, revision has been accepted as intertwined with pre-writing and writing; yet, in the classroom, perhaps for pragmatic considerations of time and organization, teachers, and textbooks (Rose, 1980) have adopted the three stages of this continuum without questioning the relationship of the time and effort involved and the gain to be derived.

The assumption that formal revision is essential in teaching the student to improve his writing skills seems quite natural since all writers revise at some time or another and professional writers often report that they revise extensively (Cowley, 1958; Plimpton, 1967; van Gelder, 1946). Recent major ethnographic, descriptive, and case studies have shown that students do revise (Graves, 1975; Perl, 1979; Pianko, 1979;

Sommers, 1979; Stallard, 1974), some even in a way that impedes the composing process (Perl, 1979). Murray (1978, 1978a, 1978b, 1979), whose widespread contributions to the field of the teaching of writing are not to be discounted,has said that writing is revision. His opinion, however, as well as that of many other teachers, could well have been shaped by his own writing habits and the writing habits of other, adult, expert writers,rather than being based on research. Beach, 1976, assumed that those who revise are better writers than those who do not, but he was challenged by Dieterich (1976) who questioned the practice of forcing students who had been accustomed to writing a single draft and revising internally to accept a new method of composing.

Recent studies and articles on revision have either focused on what students actually do when they write and revise or have accepted the assumption that formal revision is essential to improvement of writing skills and have developed ways to teach revision (Flanigan and Menendez, 1980; Haley-James, 1981; Kirby and Liner, 1980).

Both researchers and classroom teachers have observed that second and third drafts required in formal revision are often either inferior to prior drafts or are merely neat copies of the first draft in spite of teacher and peer evaluation. Teachers spend hours in evaluative procedures that are expected to prompt revisions (Squire and Applebee, 1968) and yet no one has been able to state with any degree of certainty that the final, formal revision, after the other phases of the process of writing, is effective in improving writing.

Analysis of Research

Studies have been cited as proof that revision is one of the few teaching methodologies that is effective in bringing improvement in student writing (Bamberg, 1978) yet an analysis of these studies shows an insufficiency of evidence. In some cases, the variable involved was not revision; in others, the variables compared were revision and something other than lack-of-revision.

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Three studies show that required revisions seem to bring reductions in errors of punctuation, grammar

or mechanics (Fellows, 1930; Lyman, 1931; Dudenhefer, 1975). Four studies measure something other than revision. The variable in the Maize study (1952) was (combined and undifferentiated) teacher instruction, peer feedback, and frequent writing compared to a traditional grammar approach. The Buxton study (1958) called one group "revision" but actaually had a "taught" group, one in which students were instructed in critical thinking, use of a central idea, choice of words, unity, transitions, and avoidance of fallacious thinking and writing. Heys (1962) compared revision practices to multiple reading experiences. McColley and Remsted (1963) measured six variables and, in essence, found 'teaching" the critical element. Their study combined revision with motivation, selective criticism, discussion, and practical explanation.

Four studies show no significant improvemnt in writing after required revision (Arnold, 1963; Effros, 1973; Underwood, 1968; and Wunsch, 1980). Underwood herself did not claim that revision had made the difference in the improvement she found. She cited

"too many factors to consider," (p. 35) although her study is used to support the assumption.

A recent study (Hillocks, 1982) shows that an assignment/revision group improved writing skills more than did an assignment/non-revision group, but not significantly so, but that the mean gain for students asked to revise differed only minimally from the mean gain of those who did no revising when the pre-writing/ revision and pre-writing /non-revision groups were included. This suggests the possibility that other forces, perhaps in the motivational discussions of the assignment groups, might have been an element in the reported improvement.

One study (Hansen, 1978) purported to show that revision was ineffective in improving writing skills. Fulkerson, 1978, however, challenged her research methodology and little attention has apparently been paid to her conclusions.

Theoretical Foundation

An investigation of research which describes the revision practices of students from primary school years through the freshman year of college shows two patterns: one of age and one of development.

Beginning writers in the primary grades show patterns of preference for prewriting (reactive behavior) and revision (reflective behavior) (Graves, 1979), but macro-revisions seem dependent upon teacher intervention. At the third grade level (Calkins, 1980) children show patterns of random drafting, refining, interacting, or transition. By the fifth grade (Sawkins, 1975) student rewrite to make a neater paper. By the eighth grade (NAEP, 1977) students have become able to recognize a NO decision (Nold, 1978) in relation to surface features that do not correspond to internalized grapholect, but are apparently unable to actually improve work through revision so that original versions are often qualitatively superior to revised work (Bracewell, Scardamalia, and Bereiter, 1978 . Cited in Rubin and Piche, 1979)

There is a gap in information describing the revision practices between fifth and eighth grades and again between eighth grade and twelfth.

By the high school senior level or freshman in college level, students have divided along lines of development of writing expertise into better, traditional, and basic writers. With rare exceptions,they see their writing, once in place, as complete and are unable to re-see

their work (Bridwell, 1980; NAEP, 1977; Sommers, 1978).

This study theorizes that this inability to see their own writing problems--the lack of support or development, the awkward or non-existent transitions, the lack of awareness of audience, purpose, or function--results from the inability to go beyond the skills which the student has internalized. At the point of proposed revision, it is theorized, the student has used her skills to the best of her ability and is unable to go beyond that level of writing without specific instruction, either by the teacher or by another student who has internalized those lacking skills.

The construct of internalization is defined here as the integration of new knowledge, either taught by others or perceived by the subject, into the subconscious and conscious patterns of thinking. Internalization of writing skills draws from monitor theory developed by Krashen (Kroll, 1979). Monitor theory suggests that students automatically compare their work to their internalized knowledge in a gestalt method (macro) and a detailed level (micro).

Applying this theory to a second theory of schema (Durkin, 1981); Hacker, 1980) which says that whatever is learned is stored in the mind, not in a static, unchanging form, but in a flexible form that is modified by further learning, completes the construct of internalization. Writing, as a higher level of abstraction than speech (Vygotsky, 1967) is usually taught, in balance, more than acquired. Some basic schemata at the subskill or en route skill level (Squire, 1982) must of necessity be learned--sounds, letters, handwriting--while higher level skills such as organization, coherence, and unity may well be acquired through reading. The older student, having read non-fiction essays, textbooks, letters, and descriptions, has absorbed, or internalized, non-fiction schemata (Durkin, 1981) by reading, through learning, and from teaching.

Writers in the teaching of writing field often refer to this internalization (Emig, 1979, p. 10; Shaughnessy, 1977, pp. 317-318). Adults who have learned to write expertly without process instruction have probably internalized their skills through the acquisition of schema.

Purpose of Study

This study, then, was planned, first to separate formal revision from other variables such as peer and teacher feedback and evaluation, teacher instruction, frequent writing, and to measure the effect of formal revision against lack-of-formal revision; and, second, to attempt to explain why students find difficulty in re-seeing their work and being unable, therefore, to revise as teachers would wish them to.

Methodology

Subjects

Sixty-eight seniors in three classes at an all-Black, urban, middle-class high school in Philadelphia, completed a pre- and posttest in an experimental period that spanned nineteen weeks. Two of the classes were college-bound seniors who had voluntarily elected a course in writing called English Enrichment; the third class, used as a control, was a standard English IV group of non-college bound seniors.

The two experimental classes were held during contiguous class periods with equal disruptions and students were randomly assigned to one or the other class by computer. The fifth period class was designated the Revisers and

the sixth period class the Non-Revisers. Twenty-seven of the Revisers, 25 of the Non-Revisers, and 16 of the Control class completed both the pre- and the posttests.

The Prompts

A topic which had been used from March 1979 to February 1980 for the New Jersey College Basic Skills Placement Test, and which had been developed by the Educational Testing Service in Princeton, New Jersey, was modified slightly to provide an A and a B version and then administered to all three classes during the first and last weeks of the experiment.

Since the variable tested was formal revision, both pre- and posttest administration included a first day of group pre-writing, a second day of writing, a third day of group evaluation, and a fourth day of rewriting or revising (Sanders and Littlefield, 1975).

Enriched Instructional Program

Both experimental classes were taught by the author-researcher; the control class taught by another experienced teacher. The Revisers and Non-Revisers were taught expository and persuasive writing in process fashion to conform with research on the teaching of writing. The Control class was taught grammar and literature in a

conventional twelfth grade curriculum.

Revisers and Non-Revisers received the same assignments and were presented with the same instructional materials each day in the same way, except for the nine days of interventions. Both classes were taught to evaluate other students' work and use guided peer feedback; to consider their own and other students' writing from the dual points of view of audience and purpose. They were taught ways to discover and add supporting details, methods of organization, ways of adding to coherence through the use of transitions within and between paragraphs, the identification of and replacement of extraneous and judgemental material. They were given vocabulary and sentence combining and journal writing as a part of their daily work.

Both classes were told they could do as many drafts as they wished, but, in practice, students in both classes did only as many drafts as they were required to do.

Interventions

On nine occasions during the sixteen weeks of the enriched teaching, the Revisers were required to revise their work, were encouraged to build their writing skills through revision, were taught that the teacher valued

revision, and were given extra-credit for successful revision. Non-Revisers were given grammar worksheets or were simply asked to recopy papers in neat form during comparable time periods.

Scoring of the Pre- and Posttests

Two experienced English teachers who served as raters were given 17 trial papers taken from the same universe of students and written as either pre- or posttests. The teachers were instructed to score these holistically using a 1 to 6 scale. Their preliminary ratings showed an inter-correlation of .71. For this study, a minimum figure of .60 had been set for both intra- and inter-reliabilities.

To determine if the scorers were consistent within their own ratings, thirty papers of the complete set of 136 from all three classes, were re-duplicated. The two scorers then were asked to score all 166 papers, randomly assorted into five sets, over a period of five days. The thirty re-duplicated papers and the original thirty papers were then paired by scores, and self-reliability computed by a Pearson's product moment correlation co-efficient. Scorer A showed a self-correlation of .94; Scorer B, .71.

On the total set of 166 papers, the inter-reliability between Scorers A and B was .64.

Insert Table 1 about here

Table 1

Correlations Between Two Raters on
Test Samples and Total Set of Pre- and Posttests
From Revisers, Non-Revisers and Control

Scorers	17 Sample Papers	166 Complete Set
A and B	.71	.64

Self-correlations of Each of Two Raters
On Thirty Reduplicated Papers

Scorer A	.72
Scorer B	.96

The rating of each paper became the sum of the two scores assigned that paper by the two raters. In the case of the re-duplicated papers, all four scores were summed and the average used.

Pre- and posttest scores for each class were drawn from the total scores to develop a mean for each category.

Results

Improvement in Writing

A series of *t*-tests (Revisers and Non-Revisers; Revisers and Control; Non-Revisers and Control) established that there was no significant difference in writing ability between the two experimental classes, but there was a significant difference between the Control class and the Revisers and between the Control class and the Non-Revisers. Using the difference in class summed scores between pre- and posttest as a covariate, an analysis of covariance (ANCOVA) was run on the three classes. A significant *F* was found for the between group variance as shown in Table 2.

Insert Table 2 about here

Table 5
Means Improvements of Three Groups
Revisers, Non-Revisers, and Control
Between Pre- and Posttests

	Pretest Mean	Posttest Mean	Improvement
Revisers n = 27	7.63	8.39	.76
Non-Revisers n = 25	6.74	7.90	1.16
Control n = 16	5	5.03	.03

Note: Improvement measured on a rating scale, summed of 2-12, difference between pre-test and posttest scores.

Inspection of the means and prior t-tests on the pre-tests, showed that the level of significance was attributable to differences between the control group and the other two groups, rather than between the two experimental groups. A t-test run on the two experimental groups showed no significant difference in improvement in writing between Revisers and Non-Revisers.

Further Analysis of Experimental Classes

Raw scores showed that the Non-Revisers had improved more than the Revisers but had started from a lower score. This was attributed to a regression toward the mean. When no significant difference in improvent in writing was apparent, four other measures were tested by t-tests; 1. audience awareness 2. change in length of papers 3. change in number of paragraphs 4. improvement of males and improvement of females.

Using the pre- and posttests for each of the two classes, audience awareness was measured on the following scale designed by the researcher:

0 - Nc evidence of audience awareness.

1 - Use of a salutation addressed to a particular audience.

2 - No salutation, but evidence in content of awareness of audience, usually in last paragraph.

3 - Salutation and content.

4 - An additional appeal to the audience, beyond salutation and content, giving reasons why it was in the audience's best interest to act.

No significant difference was found in any of these measures.

Measures of Variables Within the Reviser Class

The Reviser group, which had been subject to nine interventions, was further examined for possible effects of the experimental treatment. Chi-square contingency tables were set up to measure the following:

1. Distribution of skill levels as determined by posttest scores compared to the degree of revisions as measured by the amount of revision done on six of the nine interventions where complete sets of data were available.
2. Degree of revision by improvement in writing.
3. Improvement in writing, by grades assigned for the two grading periods involved in the experiment.

The degree of revision was measured on six of the nine interventions by a scale designed by the researcher. Each paper was given a numerical revision score on the basis of the following scale:

5 - Macro changes. Evidence of complete re-seeing of the piece to change the meaning if the first and second drafts were to be summarized. (Faigley and Witte, 1981). Improvement is implied, not a complete rewriting.

4 - Major content and order changes (additions, deletions, substitutions, and reorderings) to improve the quality of the paper.

3 - Minor changes of words and sentences with minor additions of content or minor additions, deletions, substitutions, or reorderings, all with the result that the paper was improved. Most of these are word substitutions.

2 - Changes in content, order, sentences, or words which were intended to improve the paper but either did not improve it or actually worsened content or readibility. This included complete rewritings that were not improvements over the original paper.

1 - Recopied paper, called revision.

0 - Not doing the assigned revision at all.

On each of the three measures, with one-degree of freedom at the .05 level, no significance was shown.

Insert Table 3 about here

Also Insert Tables 4 and 5

Table 3

Analysis of Co-Variance
Across Revisers, Non-Revisers, and Control
Pre- and Posttest Data
Of Initial Differences in Writing Skills

	Source of Variation		
	Between	Within	Total
Sum of pre-test squares	73.47	268.44	841.91
Sum of post-test squares	130.41	241.90	372.31
Sum of products:	91.71	144.46	236.17
Degrees of freedom	2	65	67
Adjusted sum of squares of post-tests	141.90	164.16	306.06
Degrees of freedom for adjusted sum of squares	2	64	66
Variance estimates	70.95	2.57	

$F = 70.95 / 3.57 = 27.61$ $p. < .01$

Table 4

Improvement of Writing Between
Revisers and Non-Revisers

Improvement	Mean	S.D.	t-value
Revisers n = 27	.76	1.64	.73 N.S.
Non-Revisers n = 25	1.16	2.22	

Not significant at the .05 level

Effects on Writing Behavior

When it became apparent that not only had the interventions of required formal revision made no significant difference between the two experimental classes, but also that neither the degree of revisions done in the nine interventions by the student Revisers nor the grades assigned had shown a significant difference, an additional attempt was made to determine if revision that was required had made any difference at all.

Four of the students who had improved most in each of the two experimental classes were called by telephone and asked a series of eight questions. Questions two, four, and five were the essential ones to determine if the experimental variable had made any difference in writing behavior. The other questions were designed to avoid the bias that would have developed if the subjects had known that it was their revision practices the researcher was most interested in.

The questions were as follows:

1. What was the one factor that you think did most to help you improve your writing ability?
2. Did you revise the papers assigned to you, and if you did, do you think that revision made any difference in how much you learned.

3. Was there any one paper assigned that helped make a difference in your writing? If so, which one and how did it make a difference?
4. Pretend you are in college and have been assigned a major paper to write. Tell me, step by step, how you would go about writing it?
5. How is this process different from the way you used to write? Think about any major paper you wrote in your junior year, before you had this class, and tell me how you went about writing it.
6. How much of what you learned about writing came from the peer evaluation?
7. What specifically did you learn from peers?
8. Can you tell me the names of the peers who helped you most? What about the names of those you think you helped the most?

Of the four students from the Revisers, all reported the use of revision during the class year; all stated that they would make revisions, major ones if necessary, on future papers; most stated that they had done very little revision on papers prior to the course.

By contrast, the four students from the Non-Revisers reported very little revision during the class year; stated that they would do no revision on major papers in the future; and reported little or no revision on papers prior to the course.

Thus, on this limited sample, it became apparent that the effects of the interventions were on the reported future behavioral patterns of the students rather than on the improvement in their writing.

Discussion

The average teacher of English at the high school level finds guidance for her patterns of teaching from texts available and from her past experiences as a writer. With the lag that exists between research knowledge and new text books (Rose, 1981), the danger exists that the pervasive assumption that all students must do formal revision in the simplistic pre-writing, writing, and revision model, will further discourage untrained English teachers from assigning writing. The teacher with Bay Area type training will understand that revision is also recursive and that all papers are not worthy of revision, but the conscientious teacher may carry the burden of the logistics of checking multiple drafts of student papers, perhaps unnecessarily.

This study was not intended to demonstrate that revision is never necessary, since it must be accepted

without question that expert writers do revise, and our goal as teachers is to lead students toward adult writing ability. What is questioned is the means by which high school teachers are expected to build that ability. If the theory of internalization of skills of writing as proposed in this paper, is correct, it behooves the teacher to consider a re-evaluation of the time and attention allotted to the stages of writing in process-style instruction. Revision in the formal stage may well be actually counter-productive, a point of view supported by the often-observed reluctance of high school students to revise their papers and the often inferior and discouraging results handed in after required revisions. The teacher could as well spend valuable classroom time enriching the writing instruction through teacher instruction, peer and teacher feedback and evaluation during the process of writing, sentence combining and associated vocabulary enrichment, and journal writing. This study shows that a reconsideration of the division of instructional time is due.

Limitations

It is possible that a similar study extended over a year or more of instruction might demonstrate that Revisers become better writers, or, since the study showed behavioral intent differences in revision practices in four of the

Revisers, that a longitudinal study would show that Revisers eventually become better writers. It is equally possible that the revision-intent makes no difference, and that the act of revision comes automatically to adult writers when they have internalized enough of the sub-skills to see the disparities and deficiencies in their own writing.

Possible Explanations

Since this study reaches the same conclusion as the Hansen study and does not conflict with the more recent Hillock study, and, further, agrees with the no-significant difference finding of similar studies already cited, it seems appropriate to speculate why formal revision seems to make so little difference in writing ability at the high school level:

1. Many students in the twelfth grade might not yet have internalized enough of the complex schemata required for adult writing for the seniors to profit from required formal revision.
2. Perhaps a "disciplined" approach to writing does not need formal revision, as least on all papers, whereas, in an "unstructured" approach such as that advocated by Elbow (1963) such revisions are inevitable.

3. Additional reading and other school experiences may be necessary for students to develop the capacity to "re-see" their work enough to revise adequately. Faigley and Witte (1981) found almost no macro-changes in inexperienced writers, which suggests that schema are absorbed through additional experiences. The one assignment that all eight students from both classes reported as having contributed most to their learning was an assignment in which students read pre-writing background materials aloud to each other in groups and were given additional articles to take home to read.
4. Students may have felt that they had met the requirements of the teacher and peers after their extensive pre-writing experiences in this class, required with all assignments. They might therefore have felt no sense of incongruity or the "NO" decision (Nold, 1978). In a freer atmosphere of teaching where the student must grope for ideas and shape them later, or conversely, in the "assigned writing" mode where the student has no

idea of teacher or peer opinion of his work until after it has been totally shaped, required, formal revision might be of more importance.

This study suggests the possibility that formal revision was demonstrated as unnecessary at this stage of these students' development because of the enrichment before the formal revision stage. The multiple pre-writing experiences, the pervasive peer feedback, the teacher evaluations in process, clearly made a difference in these students' ability to write. It can be speculated that revisions may have become recursive and talked out with peers before students reached the writing stage. Ideas developed may have changed while the product was in process, unformed, before the initial writing. In other words, the extensive pre-writing experiences and peer feedback may have trained both Revisers and Non-Revisers to follow the pattern that Graves found in second graders, the pattern of the reactive writer, who thinks out the subject first and then, after writing, sets the work aside and sees no incongruity in it.

Implications

This study questions a shibboleth often mouthed at conferences when writing-teacher professionals gather. Whole careers would be at risk if further study supports the findings discussed here, and because of this, the findings will no doubt be vigorously attacked; if so, the study will have served an important purpose: To guarantee that writing teachers think carefully about the proportion of time spent in their writing instruction on the stages of pre-writing stimulation and planning, the feedback by peers and teachers during the writing process itself, and the apparently futile required revision.

Precious classroom, instructional, and homework time should be spent as productively as possible, and this study indicates that there are strong questions whether required revisions use the time of the teacher or the student effectively.

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